

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Patent Application of

Stuart Butterworth et al.

Application No.: 10/788,820

Filed: February 27, 2004

For: CONTACT-BONDED OPTICALLY  
PUMPED SEMICONDUCTOR LASER  
STRUCTURE

Confirmation No.: 6927

Group Art Unit: 2828

Examiner: Unknown

**INFORMATION DISCLOSURE  
STATEMENT**353 Sacramento Street, Suite 2200  
San Francisco, CA 94111  
(415) 772-4900M/S AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**CERTIFICATE OF MAILING**I hereby certify that this correspondence is being deposited  
with the United States Postal Service as First Class Mail in an  
envelope, addressed to: Commissioner for Patents, P.O.  
Box 1450, Alexandria, VA 22313-1450 on July 1, 2004.

STALLMAN &amp; POLLOCK LLP

Dated: 07/1/2004

By: *Georgia K. Smith*  
Georgia K. Smith

Sir:

Applicant(s) submit(s) herewith patents, publications or other information [attached hereto and listed on the attached Form PTO-1449 (modified)] of which they are aware, which they believe(s) may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

This Information Disclosure Statement:

- (a) ☐ accompanies the new patent application submitted herewith. 37 CFR § 1.97(a).
- (b) ☐ is filed within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 CFR § 1.491.
- (c) ☒ as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits, or before a first office action after filing a Request for Continued Examination under §1.114.
- (d) ☐ is filed after the first office action and more than three months after the application's filing date or PCT national stage date of entry filing but, as far as is

known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and is accompanied by either the fee (\$180) set forth in 37 CFR § 1.17(p) or a certification as specified in 37 CFR § 1.97(e), as checked below.

- (e) ☐ is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and the Issue Fee has not been paid, and is accompanied by the fee (\$130) set forth in 37 CFR § 1.17(i)(1) and a certification as specified in 37 CFR § 1.97(e), as checked below. This document is to be considered as a petition requesting consideration of the information disclosure statement.

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR § 1.97(e) may need to be completed.] The undersigned certifies that:

- (f) ☐ Each item of information contained in the information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- (g) ☐ No item of information contained in this information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this information disclosure statement.

A list of the patent(s) or publication(s) is set forth on the attached Form PTO-1449 (Modified).

A copy of the items on PTO-1449 (Modified) is supplied herewith, except as noted below.

Those patent(s) or publication(s) which are marked with an asterisk (\*) in the attached form PTO-1449 (Modified) are not supplied because they are (a) either U.S. Patents and this an application filed after June 30, 2003, or (b) were previously cited by or submitted to the Office in a prior application no. \_\_\_\_\_, filed \_\_\_\_\_ and relied upon in this application for an earlier filing date under 35 U.S.C. § 120.

A concise explanation of relevance of the items listed on form PTO-1449 (Modified) is:

- (k) ☒ not given

- (l) ☐ given for each listed item
- (m) ☐ given for only non-English language listed item(s) [Required]
- (n) ☐ is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references [copy attached].

The Examiner is reminded that a "concise explanation of the relevance" of the submitted items "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention," MPEP § 609.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.


In accordance with 37 CFR § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR § 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR § 1.98 and MPEP § 609 and the Examiner is respectfully requested to consider the listed references.

- ☒ The Commissioner is hereby authorized to charge our Deposit Account No. 50-1703, under Order No. COHP-5040, for any fees required in connection with the filing of this Information Disclosure Statement. **A duplicate copy of this Notice is enclosed for this purpose.** In particular, in the event that an Office Action has crossed in the mail with this Information Disclosure Statement, the Commissioner is authorized to charge the above-named deposit account for any fees required pursuant to CFR §§ 1.17(p) or 1.17(i)(1).


Respectfully submitted,

STALLMAN & POLLOCK LLP

Dated: July 1, 2004

By:   
Michael A. Stallman (Reg. No. 29,444)

Attorneys for Applicant(s)

	<b>Docket Number (Optional)</b> COHP-5040	<b>Application Number</b> 10/788,820
	<b>Applicant(s)</b> Stuart Butterworth et al.	
	<b>Filing Date</b> February 27, 2004	<b>Group Art Unit</b> 2828

### U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	*AA	3,556,640	01/19/1971	Austin	350	164	03/01/1968
	*AB	3,578,848	05/18/1971	Austin	350	320	01/26/1968
	*AC	5,846,638	12/08/1998	Meissner	428	220	12/29/1995

### FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

### OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

	AD	J.E. Hastie et al., "Thermal management of VECSELs with the use of intra-cavity crystalline heatspreaders", Institute of Photonics, University of Strathclyde, Glasgow, UK, IEE Website (2002), 5 pages in length.
	AE	W.J. Alford et al., "High power and good beam quality at 980 nm from a vertical external-cavity surface-emitting laser", <i>J. Opt. Soc. Am. B</i> , Vol. 19, No. 4, April 2002, pp. 663-666.
	AF	W.W. Bewley et al., "Thermal Characterization of Diamond-Pressure-Bond Heat Sinking for Optically Pumped Mid-Infrared Lasers", <i>IEEE Journal of Quantum Electronics</i> , Vol. 35, No. 11, November 1999, pp. 1597-1601.
	AG	T. Sugino et al., "p-diamond/n-GaAs junctions formed by direct bonding," <i>Electronics Letters</i> , Vol. 32, No. 1, 4th January 1996, pp. 71-73.

<b>Examiner</b>	<b>Date Considered</b>
<b>Examiner:</b> Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	